

GENERAL HEALTH INFORMATION

SUGGESTIONS FOR REFINING THE MESSAGE IN PRIMARY PRACTICE

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Abstract:

AIM To identify the level of sophistication of health information in a health aware group of young adults. Discrepancies between the information level of data collected and that available in the scientific literature is construed as a health information need. It is surmised that such information may provide chiropractic practitioners with a preliminary guideline for more efficiently conveying general health information in clinical practice.

DESIGN A survey was undertaken to describe the level of general health knowledge in a group of health aware young adults. A convenience sample of 60 chiropractic and osteopathy students who have completed half of their professional training was selected. Data was collected by means of a closed-question questionnaire.

RESULTS Participants were found to have a good general knowledge of health risks but demonstrated a potential learning need with respect to the extent of health hazard associated with particular risk factors and the dose-response or threshold level of risk factor exposure. The desirability of targeting health information at crucial stages of the lifecycle is discussed as is the potential impact on behaviour change of a discrepancy between factual knowledge and belief.

CONCLUSIONS Primary practitioners may most efficiently convey health information in their practice when they focus their message on the health information needs of their patients. The possibility that the patient lacks a comprehensive overview of the outcome of a hazardous behaviour should be investigated as should patient awareness of threshold exposure limits and periods of crucial psychophysiological susceptibility to behavioural choices.

Key Indexing Terms: Health information, health needs, patient education, health promotion

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Both health education programs and primary care consultations are important formal sources of information upon which Australians can base lifestyle choices. Lifestyle choices have a significant impact on the conditions most feared by and most likely to kill Australians (1). Cancer, AIDS and ischaemic heart disease are the diseases most feared by Australians (1). Ischaemic heart disease, cancer and cerebro-vascular accidents are amongst the four leading causes of death in Australia (2). A substantial number of deaths in Australia are also drug related (25,397 in 1987). Seventy-one percent (71%) of these were due to tobacco and 26% to alcohol (3).

There is evidence which suggests that the community is having some success in addressing its health concerns. The trend of risk factor prevalence surveys of 1980, 1983 and 1989 of Australians aged 25-64 shows (4):

- a decrease in the prevalence of hypertension
- a decline in alcohol consumption
- that adding salt to food was less common
- fewer people were eating the fat on meat
- walking and other forms of less vigorous exercise are becoming more popular
- an overall improvement in lipid levels albeit limited to elderly women and young men

Despite evidence supporting the notion that Australians are embracing the health promotion message, there is room for improvement. During this decade of health gains, an increase in body mass index (BMI) was recorded (4). Some 44% of men and 30% of women are overweight or obese (2).

An additional particular source of concern is the health of young Australians. Despite a decline in smoking and alcohol consumption in Australia (4), these behaviours remain a problem in childhood and adolescence (5). Despite widespread recognition amongst schoolchildren that smoking is addictive and can cause lung cancer and heart disease (6), a 1989 survey found that 20% of 16-19 year old males and 31% of females were current smokers (7). Although there was a decrease in alcohol consumed by 12-15 year olds during the period of 1984-1987, 55% of 15 year old boys and 50% of 17 year old girls consume one or more drinks each week (5). Furthermore, alcohol consumption seems to start at an early age

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amongst Australian children. By 0 years of age 16% of girls and 26% of boys drink alcohol (6). By 15 years of age more than 50% of students consume alcohol (6).

Another concern Australia Health Authorities express, with respect to young Australians, is the increasing community resistance to childhood immunisation. Despite the NHMRC continually updating its immunisation guidelines and health authorities urging more comprehensive adherence to childhood immunisation guidelines (8,9), some one in five Australian children had had no immunisation in 1994 and in 1993 Australia experienced major outbreaks of whooping cough, measles and rubella.

Implementation of behaviours consistent with adoption of health promotion messages by the community appears somewhat patchy. Translation of health knowledge into health practice is modified by diverse variables including personally perceived threats, benefits and obstacles to change. The accuracy and precision of health information may consequently have a substantial impact on the decision to change. The decision to implement health information may be enhanced if a more detailed appreciation of risk supplants a vague understanding of hazard. Awareness of the full spectrum of adverse outcomes correlating with a given behavioural risk and appreciation of the exact nature of the change required to achieve a beneficial outcome may well encourage health promotion behaviours. While it may be unrealistic to expect that community health education programs provide such a sophisticated a level of health information, it is not unreasonable for primary practitioners to provide their patients with an advanced health message. In view of the time constraints in clinical practice and the potential impact practitioners can have on patients' health choices, it was decided to explore the level of health awareness of a group of young adults with a particular interest in health matters. Discrepancies detected between the health knowledge of participants and the current literature may then serve to identify deficiencies in the health perceptions of the study group which can serve as a guideline for practitioners, in their patient and for education in their undergraduate education programs.

METHODS

a convenience sample of 60 young adults enrolled in the chiropractic and osteopathic programs at RMIT were invited to complete a questionnaire on the potential health impact of alcohol, cigarette smoking, exercise, a high fat diet, a high fibre diet, obesity and

immunisation. Closed questions were used. Participants were asked to indicate whether they considered the statements listed in tables I-IV to be definitely correct, possibly true or false. It should be noted that, with the exception of immunisation, the health knowledge assessed reflects the general health knowledge of participants as this survey was undertaken prior to the group having their formal lectures on health risk.

RESULTS

Sixty(60) students who had completed highschool and two and a half years of university education in a course training health professionals participated. Twenty-five percent (25%) of respondents also hold a degree, 5% hold a diploma and 13% a certificate. Half of respondents were 20 or 21 years old, 13% were 22 or 23, 7% were 24 or 25 and 30% were over 26 years of age. Fifty-eight percent (58%) of respondents are male, 42% female. Two percent (2%) believe that the statement "staying healthy is really a matter of luck" is definitely correct, 13% think it is possibly true and 85% consider the statement false. Tables I-IV show the respondents beliefs with respect to the health effects of alcohol, tobacco smoking, dietary fat and fibre intake, exercise, obesity and immunisation.

DISCUSSION

The majority of respondents disagree that health status is a matter of luck. The suggestion that modifying lifestyle risk factors may improve health status should not be inconceivable to members of this study group. Furthermore, it would not be implausible to suppose that the health awareness of participants may impact on their behavioural choices. While community health awareness may be the outcome of health education programs, the level of health awareness demonstrated by a particular individual can be largely influenced by their chiropractor.

Table 1: Alcohol and Health

Respondents Key	A - definitely correct		
	B - possibly true		
	C - false		
*Respondents perception(n=60)	A(%)	B(%)	C(%)
Listed Statements			
THREE GLASSES OF BEER A DAY IS BENEFICIAL FOR:			
Men	7	15	78
Non-pregnant women	2	13	85
Pregnant women	2	0	90
Two glasses of spirits a day is health hazard.	28	55	17
Heavy drinking causes liver damage.	90	10	0

* some respondents omitted certain questions.

Table II: Cigarette Smoking and Health Risk

Respondents Key	A - definitely correct		
	B - possibly true		
	C - false		
*Respondents perception(n=60)	A(%)	B(%)	C(%)
Listed Statements			
FIVE CIGARETTES A DAY IS BENEFICIAL FOR:			
Men	0	0	100
Non-pregnant women	0	0	100
Pregnant women	0	0	100
SMOKING:			
is a cause of coronary artery/heart disease	70	22	7
is a cause of peripheral vascular disease	58	38	3
is a cause of lung cancer	95	3	0
is a cause of laryngeal cancer	88	8	0
is a cause of oral cancer	82	17	0
is a cause of oesophageal cancer	47	42	12
is a cause of bladder cancer	3	52	43
is a cause of stomach cancer	5	53	35
is a cause of peptic ulcers	19	55	35
is a cause of chronic obstructive airways disease	53	37	10
is a cause of intrauterine growth retardation	72	25	2
is a cause of low-birthweight babies	68	39	2
makes you catch cold easily	27	39	15
slows your circulation and makes your fingers cold	52	47	2
keeps you alert	12	55	33
decreases your capacity to play sport well	82	15	3
makes breathing difficult	65	35	0
calms the nerves	27	3	37
keeps you slim	15	58	27
gives you bad breath	87	13	0
is addictive	100	0	0
is a habit which is easy to change	5	8	85

* some respondents omitted certain questions.

In this study a lack of precision with respect to the impact of risky behaviours was noted. While respondents are largely cognisant of behaviours which carry a health risk, an inadequate appreciation of 'dose-response' relationships and the diversity of diseases which correlate with particular behaviours was detected. Participants largely consider alcohol to constitute a health hazard and cause liver damage. However, only 7% believe and 15% suspect that alcohol below a threshold level may carry a health benefit. For middle aged or older men, the mortality amongst regular drinkers from all causes increases above 21 units per week (3 standard drinks a day) and below one or two units per day (10). It is worth noting that these researchers report that the lowest overall mortality for men between the age of about 50-90 years is found in those who drink 8 to 14 glasses of beer, wine or equivalent drinks per week. Despite an inadequate appreciation of the dose-response effect of alcohol, respondents are not unfamiliar with the

concepts of a threshold effect. Exercise at one third of maximum pulse rate was thought to improve skeletal health, its impact at this level on cardiovascular fitness was questioned by the majority of respondents.

Table III: Diet, Exercise, Obesity and Disease

Respondents Key	A - definitely correct		
	B - possibly true		
	C - false		
*Respondents perception(n=60)	A(%)	B(%)	C(%)
Listed Statements			
PEOPLE ON HIGH FAT DIETS ARE AT INCREASED RISK OF:			
breast cancer	18	43	35
colon cancer	48	45	7
prostate cancer	15	58	27
coronary artery disease	97	2	0
PEOPLE ON HIGH FIBRE DIETS ARE AT DECREASED RISK OF:			
haemorrhoids	58	15	27
breast cancer	12	45	40
ischaemic heart disease	47	35	18
bowel cancer	75	10	15
obesity	55	25	20*
WALKING FOR 30 MINUTES 4 TIMES A WEEK AT ONE THIRD OF YOUR MAXIMUM PULSE RATE WILL:			
increase cardiovascular fitness	45	40	15
promote skeletal health	83	17	0
reduce stress	42	58	0
enhance weight loss	57	42	2
increases HDL cholesterol	8	42	4
bone mass can be increased in adulthood by exercise and a diet rich in calcium	27	45	28
OBESE INDIVIDUALS ARE AT INCREASED RISK OF:			
diabetes mellitus	88	10	0
high blood pressure	95	3	0
osteoporosis	13	47	48
gall bladder disease	55	40	3

* some respondents omitted certain questions.

Table IV: Immunisation

Respondents Key	A - definitely correct		
	B - possibly true		
	C - false		
*Respondents perception(n=60)	A(%)	B(%)	C(%)
Listed Statements			
IMMUNISATION:			
is unnatural and should be stopped	18	37	45
can prevent death and/or disability from certain infectious diseases of childhood	72	23	5
is effective against AIDS	0	2	97
is available against hepatitis B	85	7	8
against tetanus should be current ie regular updated by everybody	70	22	8
causes more harm than good	10	50	40

* some respondents omitted certain questions.

Respondents have a general appreciation that obesity and a high fat diet correlate with particular disease states. There are however some discrepancies in the extent to which respondents appreciate various links: a good appreciation of the correlation between high dietary fat and coronary heart disease is accompanied by a lesser recognition for the positive correlation between high dietary fat and breast and colon cancer. A similar pattern emerges with the benefits of a diet rich in fibre. While the majority of respondents are aware that a high fibre diet reduces the risk of bowel cancer, less than half of the respondents recognise the role fibre may play in the reducing the risk of haemorrhoids, ischaemic heart disease or the complications of diabetes.

In contrast to alcohol, cigarette consumption does not appear to carry any scientifically accepted health benefits. In fact, it appears that the long term risks of smoking may have been substantially underestimated and about half of all regular cigarette smokers will ultimately die of a smoking related disease (11). Respondents were unanimous in their recognition of smoking as a health hazard. Although there was less consensus about conditions which may be attributed to or exacerbated by smoking, there is a general appreciation that smoking can cause cancer. There is also clear, but less consistent, recognition that smoking can adversely affect respiratory and cardiovascular systems. Particular note should be taken of the addictive effect of cigarette smoking: analysis of studies in the UK suggest that 94% of teenagers who smoke more than 2-3 cigarettes go on to become regular smokers as adults (12).

It should also be noted that the impact of particular behaviours at certain stages of the lifecycle may have particular outcomes. The strong recognition displayed by respondents that maternal smoking is bad for the foetus is supported by the literature. Cigarette smoking has been found to substantially increase the risk of low birthweight for gestational age (13). It has been reported that up to 39% of instances of low birthweight may be attributed to smoking and a dose-effect correlation for smoking and low has been identified. Of interest to adult health is recent evidence correlating low birth weight with hypertension and impaired glucose tolerance in adulthood (14,15). Other examples of intervention at crucial stages of the lifecycle include:

- the necessity for a diet rich in calcium during childhood and adolescence. A twin study found that calcium supplementation to achieve a mean intake of 1612 mg per day of calcium over a 3 year period resulted in a significant increase in bone

density in prepubertal but not pubertal or post pubertal children (16). The control group in this study had a mean calcium intake of 908 mg per day.

- the age at which alcohol consumption is initiated. Compared to children who did not drink alcohol before the age of 13 years, children who consume alcohol before the age of 6 years are 1.9-2.4 times as likely to report frequent, heavy or problem drinking at age 15 (17). This increase was found after controlling for such variables as early childhood behaviour, parental alcohol use and family socio-demographic background.

A minimal prerequisite to health promoting behavioural choices is awareness of health risks. Appreciation of the specific health impact of particular behaviours may further contribute to any decision to change. Furthermore, the outcome of a decision to implement change may be significantly influenced by an understanding of 'dose-effect' responses and periods of enhanced psychophysiological susceptibility. Whereas community health education programs may have difficulty providing such a sophisticated level of information, chiropractic practitioners are ideally situated to make a substantial contribution at this level of health promotion. Practitioners undertaking such a role should however be mindful that failure by the patient to implement healthy behaviours is not necessarily attributable to lack of information, but may also result from a discrepancy between factual knowledge and psychological acceptance of health information.

Awareness of a health risk and the potential efficacy of an intervention is not necessarily translated into health promoting behaviours. This may be attributable to a diversity of variables one of which may be a conflict between factual knowledge and beliefs. Although just 8% of respondents are not aware that immunisation against tetanus should be regularly updated and a mere 5% do not believe that immunisation can prevent death and/or disability from infectious diseases of childhood, only 45% do not consider that immunisation is unnatural and should be stopped. Just 40% of respondents do not agree with the statement that immunisation causes more harm than good. With this mindset, despite having good factual knowledge about immunisation (note the response to the availability of immunisation against hepatitis B and AIDS), it is unlikely that immunisation will be a popular health behaviour choice in this study group. As participants have already completed their formal lectures on immunisation which emphasise the perspective of the National Health and Medical

Research Council, such findings serve to demonstrate the pervasive impact of community and professional beliefs and provide insight into the nature of the dilemma faced by Australian Health Authorities.

Health promotion at the primary practice level may be as much a function of providing accurate, relevant and current health information as influencing patients' health beliefs.

CONCLUSIONS

A survey of young adults with a particular interest in health matters suggests that, although there is a strong general awareness of risk factors, there is an incomplete appreciation of the total extent of the health hazards associated with particular levels of exposure. It is surmised that, although such detailed health information may enhance implementation of health lifestyle choices, it may be unrealistic to provide such a sophisticated a message in community health programs. It is suggested that the primary practitioner is ideally suited to undertake such a task.

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